Highway 36 Corridor Exposure Investigation
Public Health Assessment Finalized

The Oregon Health Authority-Public Health Division (OHA-PHD) just released the final version of the Highway 36 Exposure Investigation report, first issued for public comment in May 2013. This fact sheet summarizes the main differences between the public comment and final versions of the report, known as a Public Health Assessment (PHA). Changes and responses in the report are based on comments received from the public, industry, and state and federal agencies.

Background:

This EI began when a well-respected researcher made a presentation to the Board of Forestry in 2011. The presentation showed the results of a community-led urine sampling effort, indicating participants' exposures to the pesticides 2,4-D and atrazine. These are two pesticides commonly used in forestry applications. Many area residents have been expressing concerns for years about pesticides that are seasonally applied to tracts of forest lands near homes and schools. Concerns center on the health effects of the chemicals and the drift of chemicals onto people, private property, gardens and animals. Residents want help in establishing buffer zones around homes and schools.

Original Exposure Investigation questions:

1. Are residents in the Highway 36 Corridor being exposed to pesticides from local application practices?
2. If residents are being exposed:
   a. To what pesticides are they being exposed?
   b. To what levels are they being exposed?
   c. What are potential source(s) of pesticides to which they are exposed?
   d. What are potential routes (pathways) of residents' exposures?
   e. What health risks are associated with these exposures?

Clearcut behind Triangle Lake School

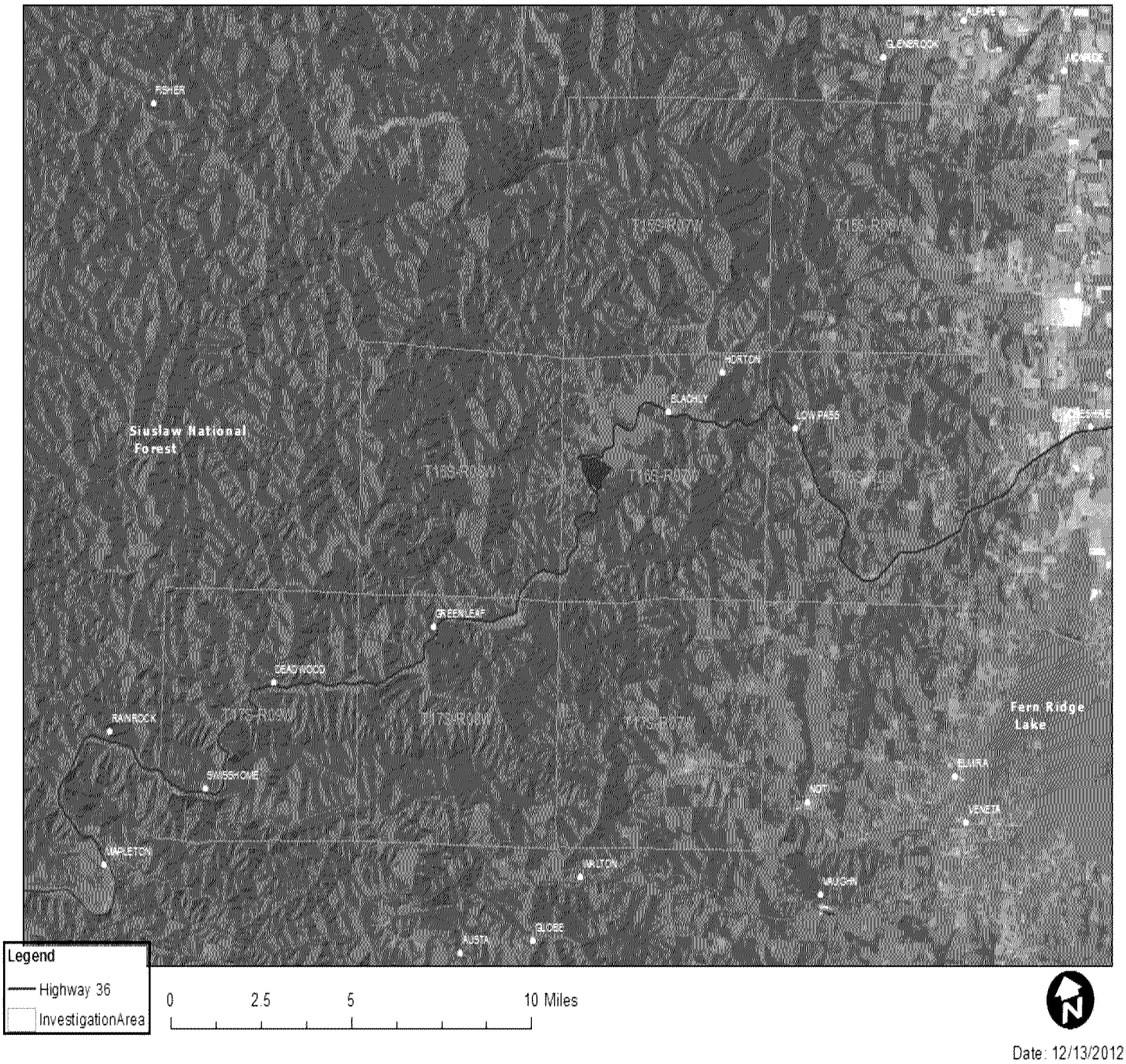
In response to the community's concerns, the Pesticide Analytical Response Center (PARC) developed an Exposure Investigation protocol. The first phase of the investigation included collecting baseline samples of urine, drinking water, soil and homegrown and wild foods. This was accomplished in Fall 2011 during the time of year when pesticide use is typically at its lowest level, when no reported pesticide applications of 2,4-D or atrazine were occurring. The plan was to then conduct additional rounds of sampling immediately after the application season began, as a way to assess whether differences in exposure potentials could be observed. However, the post-application sampling did not occur because of changes in targeted spray locations and other logistical issues, which proved to be insurmountable. This report presents the results of the baseline data collected by state and federal agencies, as well as data collected by members of the Highway 36 community.

This Public Health Assessment (PHA) reports on the analysis of the following data:

- Urine samples collected by community members in the spring of 2011;
- Urine samples collected by staff from the Agency for Toxic Substances and Disease Registry (ATSDR) and OHA in the fall of 2011;

- Environmental samples (drinking water, soil and homegrown and wild foods) collected by the U.S. Environmental Protection Agency (EPA) and the Oregon Department of Environmental Quality (DEQ) in the fall of 2011;
- 2011 pesticide application records from the Oregon Department of Forestry (ODF) and the Oregon Department of Agriculture (ODA);
- Community-collected air and water samples;
- Qualitative information collected during the course of the investigation by OHA.

Investigation area:



Clear-cut on a hilltop above Blachly

How is this version different than the public comment version?

- There was a new analysis comparing pre-application, community-collected urine samples (spring 2011) to other samples collected after the application season had started. This resulted in a new conclusion (conclusion 9), which states: ***"There are additional sources of 2,4-D and atrazine in the investigation area that are not accounted for in the pesticide application records available to the investigation team."***

- There is a new recommendation aimed at preventing human exposures to pesticides. It states that ***"State agencies continue to collaborate on determining best practices that would protect human populations from pesticide exposures."***

- There is clarified language throughout the report, and specifically related to the statistical comparison between fall 2011 sampling results and the National Health And Nutrition Examination Survey's (NHANES) 75th percentile.

- OHA analyzed additional pesticide application records that were received from ODF after the release of the public comment version. This resulted in updates to Appendix B, but not to any of the conclusions. This was because the applications did not occur during a timeframe that would affect results, and they did not include any of the pesticides that were tested for in urine.

- The scope of Conclusion 12 was restricted to the only the fall 2011 timeframe, which was when drinking water sampling was conducted. It now states: ***"Drinking water was eliminated as an exposure pathway for 2,4-D and atrazine in the fall of 2011."***

- There is a new conclusion (Conclusion 15) specifying that the investigation team does not know what the concentrations of pesticides in drinking water, soil and homegrown foods were in the spring of 2011, because no environmental sampling occurred during that time.

- This version summarizes public comments and explains how OHA responded to and addressed those comments (contained in Appendix A).

Report Recommendations:

Pertaining to the results of this EI, OHA recommends that:

- US EPA work with the EI team on developing a sampling and analysis plan designed to evaluate exposures to pesticides in air and to address gaps in the data needed to answer EI questions. At the time of publication of this report, passive air monitoring over several application seasons appears to be the best option to collect community-wide air data.

- ODA and ODF continue to provide pesticide application data as needed to interpret air sampling (or other) data collected as part of this investigation.

- State and federal agencies involved in the ongoing EI develop an implementation plan that includes identification of necessary resources to carry out activities appropriate for each agency's role in this effort.

Pertaining to broader and/or longer-term issues identified by the EI, OHA recommends that:

- State agencies continue to collaborate on determining best practices that would protect human populations from pesticide exposures.

- ODA and ODF work with pesticide applicators to develop consistent pesticide application record-keeping processes to ensure that application record data are accurately maintained and usable.

- State agencies explore the feasibility of implementing a system that would allow sensitive populations to be notified of imminent pesticide applications in such time and with such specificity that they could take action to avoid exposure to those applications. Such policies could include adoption of systems developed by other jurisdictions, or modification of existing regulatory systems designed to monitor pesticides applications.

- State and federal agencies involved in the ongoing EI develop an implementation plan to address these recommendations, including the identification of resources to carry out activities appropriate for each agency's role in serving the communities of Oregon. That plan should include a recommendation on how the agencies should coordinate, collaborate and share resources.

- Community members, including local elected officials and other community leaders, consider seeking the assistance of a professional mediation group to address immediate and long-term conflict within the community and identify actions to move this conflict toward resolution.

Next steps

OHA-PHD will:

- Work with state and federal partners, community members, and other stakeholders to implement the recommendations in this report;
- Continue maintaining the Highway 36 website; and
- In coordination with the Pesticide Analytical Response Center (PARC), provide updates through the Highway 36 listserv about findings from future investigation activities.

For more information about this Public Health Assessment, please contact EHAP at ehap.info@state.or.us or call 1-877-290-6767

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